

United States Patent [19]

Roberts et al.

[11] 3,875,942

[45] Apr. 8, 1975

[54] DIAPER CONTAINING POWDER HAVING PROPERTIES BENEFICIAL TO SKIN

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[22] Filed: Nov. 29, 1972

[21] Appl. No.: 310,373

[52] U.S. Cl. 128/287; 128/284

[51] Int. Cl. A61f 13/18

[58] Field of Search 128/284, 286, 287, 290

[56] References Cited

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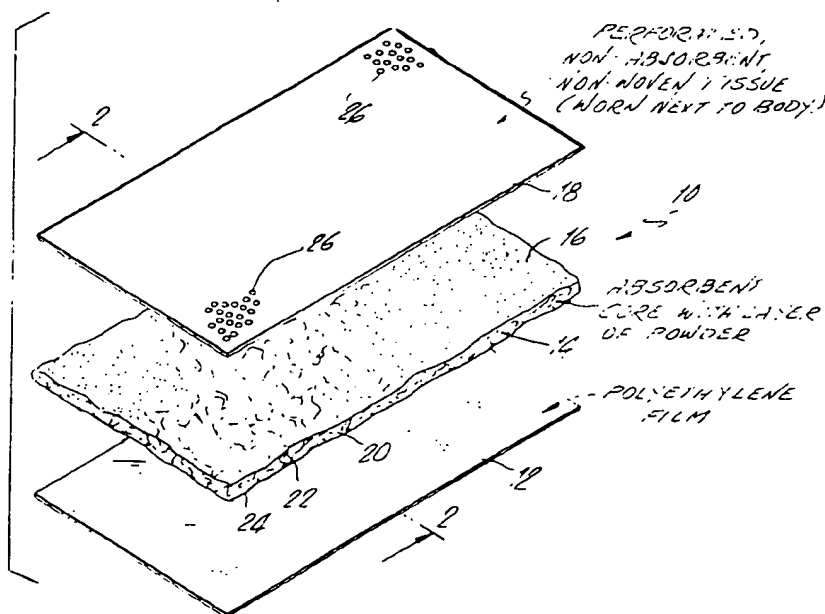
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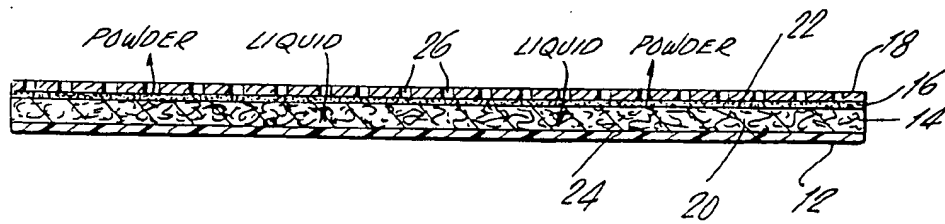
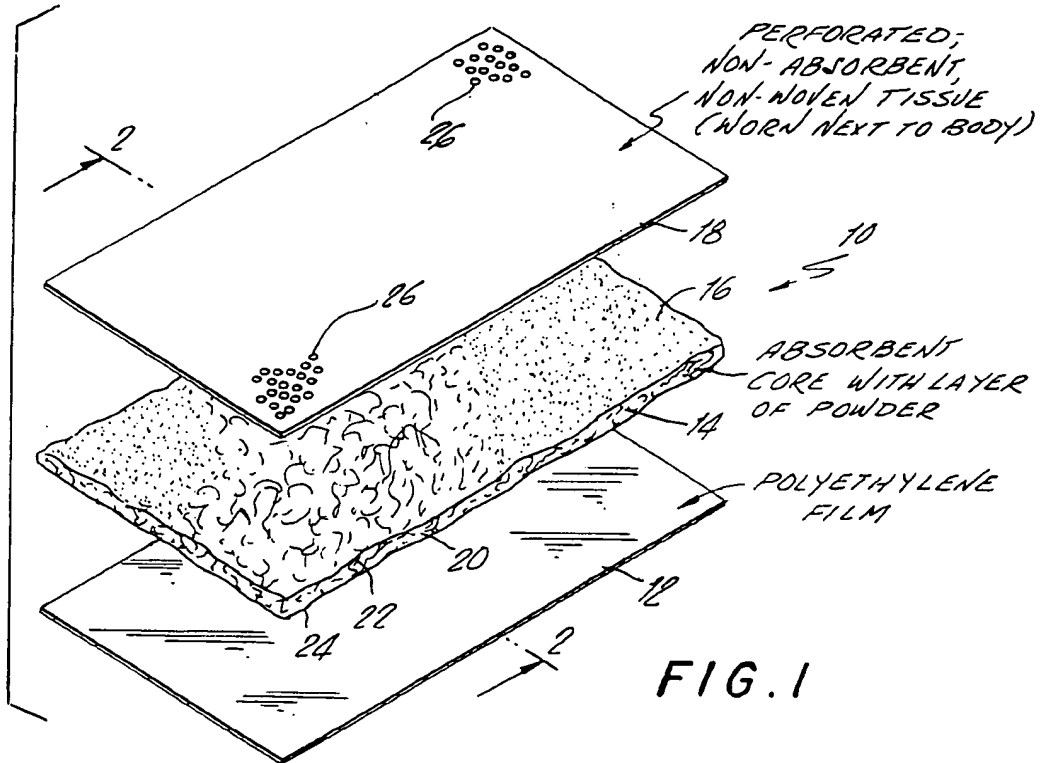
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[57] ABSTRACT

A disposable diaper having a absorbent core, an outer liquid impervious sheet on one side of the core and a layer of powder on the other side of the core. A perforated non-absorbent facing overlies the layer of powder and has a plurality of perforations therein for permitting flow of powder onto the crotch area of an infant using the diaper.

7 Claims, 2 Drawing Figures





DIAPER CONTAINING POWDER HAVING PROPERTIES BENEFICIAL TO SKIN

BACKGROUND AND FIELD OF THE INVENTION

This invention relates to a disposable diaper and more particularly to a powdered diaper for making available an immediate supply of powder from a diaper to an infant's skin in the contact area for lubrication and drying effects.

DESCRIPTION OF THE PRIOR ART

Disposable diapers have been devised for absorbing excrement from an infant in a manner so as to prevent the soiling of outer garments and so that upon disposal of the diaper, all that need be done is to dry and lubricate the skin of the infant. However, material used for drying and lubricating the infant's skin often includes bulky cans of powder, baby oil, and the like, which are burdensome for travel with the infant.

The present invention provides for a diaper which contains its own supply of powder which will feed itself to the skin of the infant during initial wear thereof so as to dry, lubricate and protect the infant's skin from chaffing while also serving to neutralize the chemical effects of the urine and feces thereafter.

Various types of diapers have been devised in the past which contain layers of absorbent material while the patent to Hayford, U.S. Pat. No. 3,585,998, provides for encapsulated baby oil in a diaper. None of the prior provides for retaining a suitable layer of powder in the diaper adapted for convenient and efficient self-application onto the skin of a baby.

SUMMARY OF THE INVENTION

It is therefore the primary object of the present invention to provide a powdered diaper adapted to make available an immediate supply of powder from the diaper to the infant's skin in the contact areas for lubrication and drying effects.

It is a further object of the invention to provide a diaper adapted for self-application of powder to the crotch area of an infant at the time of dressing the infant with the diaper and during the use thereof by the baby.

The construction of this invention features a composite layered diaper having an outer sheet of liquid impervious material, a core of woodfluff sandwiched between thin absorbent tissues, a powder layer and a non-absorbent inner layer having a plurality of small perforations for permitting the passage of liquid to the core of the diaper and the passage of powder onto the skin of the infant.

Still further objects and features of this invention reside in the provision of a disposable diaper that is simple in construction and manufacture, capable of being produced out of readily available material, and which will eliminate the need of the infant's guardian in carrying bulky cans of powder and the like when travelling with the infant.

These, together with the various ancillary objects and features of the present invention, which will become apparent as the following description proceeds, are attained by this diaper containing powder having properties beneficial to skin, a preferred embodiment of which is illustrated in the accompanying drawing, by way of example only, wherein:

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an exploded perspective view of a powdered diaper constructed in accordance with the concepts of the present invention; and,

FIG. 2 is a vertical sectional view taken along the plane of line 2-2 in FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With continuing reference to the accompanying drawing, wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 is used to generally designate the powdered disposable diaper constructed in accordance with the present invention. This diaper has four main component parts, including an outer sheet 12, a core 14, a layer of powder 16 and an inner sheet 18.

The outer sheet 12 is made of a suitable waterproof non-absorbent material, which is liquid impermeable, for preventing liquid from passing entirely through the diaper. The sheet 12 is preferably made of a polyethylene film.

The absorbent core 14 is made from a soft highly absorbent mat of wood fluff 20 sandwiched between two thin absorbent tissues 22 and 24. An appropriate quantity of powder is evenly distributed on the top of the absorbent core 14 to form a layer 16. The outer sheet 18 is in the form of a non-absorbent soft, non-woven tissue having a large number of small perforations 26. The sheet 18 permits the passage of liquid to the core of the diaper and the passage of powder to the surface of the diaper, thereby providing a "dry feel" next to the infant.

In order to assure proper functioning of the invention, the inner sheet 18 is drawn taut over the powder compacting the powder layer 16. This can be accomplished by making the mat of wood fluff 20 slightly thicker in the central portions thereof rendering it more absorbent at the critical areas, while rendering the entire diaper more flexible at the extremities thereof. Thus, with the inner sheet 18 stretched taut when secured to the other layers, as by stitching or bonding, an effective compacting of the powder layer is achieved. Accordingly, the powdered diapers can be conveniently packed and handled without likelihood of any loss of powder, yet when the diaper is placed on the baby, the taut condition of the inner sheet 18 is eliminated and the powder becomes self-applicable onto the skin of the baby eliminating the often dangerous to the baby application from the powder can which inadvertently can allow loose powder to enter the breathing apparatus of the baby.

A latitude of modification, substitution, and change is intended in the foregoing disclosure, and in some instances, some features of the present invention may be employed without a corresponding use of other features.

We claim:

1. A disposable diaper adapted to be used in contact with human skin comprising an outer sheet of liquid impervious material, an absorbent core on said sheet, a layer consisting of loose powder evenly distributed over said core, said powder having lubricating and drying effects on the skin, and an inner sheet of non-absorbent material overlying said layer of powder, said inner sheet having a plurality of perforations to permit the

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passage of liquid to the core of the diaper and the passage of powder onto the skin.

2. A disposable diaper according to claim 1 wherein said absorbent core is thicker at its center than at its edges and said inner sheet is stretched over said absorbent core for compacting said layer of powder

3. A disposable diaper according to claim 1, wherein said outer sheet is a film of polyethylene, said inner sheet being of a non-woven tissue and overlying and compacting said layer of powder.

4. A disposable diaper according to claim 1, wherein said core includes a soft mat of wood fluff sandwiched

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between two thin absorbent tissues, said outer sheet being a film of polyethylene, said inner sheet being of a non-woven tissue.

5. A disposable diaper according to claim 1, wherein said inner sheet is of non-woven tissue.

6. A disposable diaper according to claim 1, wherein said outer sheet is a thin film of polyethylene.

7. A disposable diaper according to claim 1, wherein said core includes a soft mat of wood fluff sandwiched between two thin absorbent tissues.

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